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FARM - LEVEL STUDY OF PADDY SEED PRODUCTION IN MADURAI DISTRICT

ALMAAS AMIRUDIN[1]* & K. UMA[2]

[1]*Dissertation Scholar, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India*

[2] *Professor, Department of Agricultural and Rural Management, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India*

ABSTRACT

The most important strategy for increasing productivity in developing countries is through the delivery of quality seed. The average yield of paddy is high in regions where the seed replacement rate is high. There has been an increase in the seed replacement rate since 2005 in Tamil Nadu (Mohanty et al., 2017). The government is encouraging farmers to use newly developed varieties by providing subsidy. The aim of this paper is to study about the socioeconomic profile, current practices followed by the seed farmers like adoption to new varieties of seed and also analyse the production constraints faced by them. Purposive sampling method was adopted to collect primary data from 75 farmers through a well structured interview schedule. This study was conducted across 6 major seed producing blocks in Madurai. High profit and subsidies provided by the government were the major reasons for the adoption of paddy seed production while water availability, land availability were the major constraints faced by the farmers.

KEYWORDS: Paddy, Seed, Production & Constraints

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INTRODUCTION

Seed is the most basic input in agriculture. It is the deciding factor of growth in the agricultural sector in India. Timely supply of quality seeds can increase yield by 15-25 per cent. Besides seed, crop productivity can be further increased up to 45 per cent with timely applications and efficient management of other inputs such as fertilizer, irrigated water etc (Gauchan et al., 2016). A major re-structuring of the seed industry by the Government of India took place through the three phases: National Seed Project Phase-I (1977-78), Phase-II (1978-79) and Phase-III (1990-1991), which strengthened the seed infrastructure. This was first turning point in shaping of an organized seed industry. New Seed Development Policy (1988 – 1989) was another milestone in the Indian Seed Industry, which transformed the seed industry (seednet.gov.in). Through this policy the farmers had access to the best of seed and planting material available. The use of quality seed of improved varieties also reduces cost of production due to lower seed rate requirement and disease free status of the good quality vigorous seeds. Therefore, in order to increase the quantity and quality of produce, efforts are made to introduce seeds of improved varieties suitable for different climatic condition with the help of advance technology and modern agricultural methods (seednet.gov.in., 2019).

Since agriculture is the main economic activity for the rural population, there are abundant opportunities for the seed market in India (researchandmarkets.com., 2019). A well-organized system is expected to provide seed

of adopted varieties at proper quantity, quality, and time. It should also be made available at affordable prices to farmers. Seed marketing is one of the most essential components of seed system. The difficulties of organizing effective seed delivery systems, especially to small-scale farmers, have often been underestimated (Mesfin & Zemedu., 2015) in comparison with the attention given to other activities of the seed industry. Historically, more attention and resources have been devoted to the physical aspects of seed production and storage than the complicated organizational issues involved in managing sales and distributions (Gauchan et al., 2016). The seed system is one of the important components of agriculture which involves activities such as seed production, multiplication, processing and marketing it to the ultimate seed user, the farmers. However, there is a pressing need for the State Seed Corporations to tune themselves with the seed industry in terms of infrastructure, technologies, approach and the management culture to be able to survive the competition and increase food production to attain food & nutritional security

OBJECTIVES

The main objective of the study is to explore the current farming practises followed by the farmers involved in paddy seed production, their reason for the adoption of seed production and the constraints faced by them.

METHODOLOGY

Quantitative research design was used for this study. Purposive sampling was used, with the sample size of 75. This study was conducted in six blocks in Madurai district of Tamil Nadu. Paddy seed farmers were interviewed. Percentage analysis and Garrett ranking method have been used in this study.

RESULTS AND DISCUSSIONS

The demographic profile of the farmers such as age, gender, educational qualification, family size, family type, primary occupation, secondary occupation and their experience in farming are analysed using percentage analysis are as follows:

Table 1 show the socio-economic profile of the farmers, all of the farmers who produce seeds are male are (100 percent) and most of them were between the ages of 50 to 60 (50.67 percent). Majority of the farmers completed only primary level of education (62.67 percent), 65.33 percent of farmers live as nuclear families. Since the highest percentage of farmers are above 50 years of age they have more experience in seed production therefore, 34.67 percent of the farmers have 21- 30 years of experiences in seed production.

Table 2 shows that half of the farmers in paddy seed production are medium level farmers (49.33 percent) and the rest half is distributed among large farmers (19 percent), small farmers (11 percent) and medium farmers (8 percent). The major source of irrigation is combined water usage from the open well and bore well.

Table 3 shows that most of the annual income of the farmers fall under the 10,000 – 50,000 range which is 34.67 percent which is followed by 50,000 – 1,00,000 range which is 33.33 percent.

According to **table 4**, majority of the farmers are in contract with the private seed producers which is 45.33 percent, 42.67 percent of the farmers are in contract with the government seed department and 12 percent of the farmers are under the quasi- government.

According to **graph 1**, the variety which is used the most by the seed farmer is CO 51 followed by NLR 34449,

TKM 13 and ASD 16.

According to **table 5**, most of the farmers sow their seeds during the month of September and transplant after 15 days of sowing.

Garrett ranking method was used to find the major constraints faced by the farmers during the production of paddy seed, reasons for choosing a specific variety to produce seeds and factors that influenced farmers to adopt seed marketing as their profession

According to **table 6,** the major constraint was the availability of water in the field, followed by land availability, availability of skilled labour, production cost and the processes involved in post harvest like drying of seeds to maintain the moisture content etc.

According to **table 7**, the reason for choosing a specific variety for the production of paddy seed is the demand in the market followed by yield, subsidy provided for the specific variety and suggestions from fellow farmers.

According to **table 8**, the reason for adopting seed production is because it is more profitable than grain production, which is followed by the high subsidy, to increase the quality of seed in the market and the least contributing factor as ancestral profession.

CONCLUSIONS

The study investigates about the current practises in paddy seed production followed by the farmers in Madurai district. Since the factors like the weather cannot be controlled it is important that farmers adopt suitable technologies towards agriculture (manage.gov.in., 2016) with the controllable factors like seed should be produced properly to increase the overall yield of rice production. The major constraint the farmer had been the availability of water. The government should develop more varieties which are drought resistant. The reason for most of the farmers are under private contract is due to the negligence from the seed department. Even though there are high benefits from subsidies, the farmers are not aware about them and farmers who are aware do not get paid on time because there are a lot of delays from the government side. Even though most of the farmers have medium size land holdings, hey still losing their land due to urbanization, because land availability is also one of the major constraint.

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APPENDIX

Table 1: Socio Economic Profile of Seed Farmer

S. No	Characteristics	Category	Number of Farmers	Percentage (%)
1.	Gender	Male	75	100
		Female	0	0
2.	Age	30 – 40	3	4
		40 – 50	28	37.33
		50 – 60	38	50.67
		Above 60	6	8
3	Education	Primary	47	62.67
		Secondary	16	21.33
		Higher Secondary	9	12
		Graduate	3	4
4.	Family Type	Joint	26	34.67
		Nuclear	49	65.33
5.	Experience in Farming (Years)	Below 10	25	33.33
		11 to 20	15	20
		21 to 30	26	34.67
		Above 30	9	12

Table 2: Farm Details

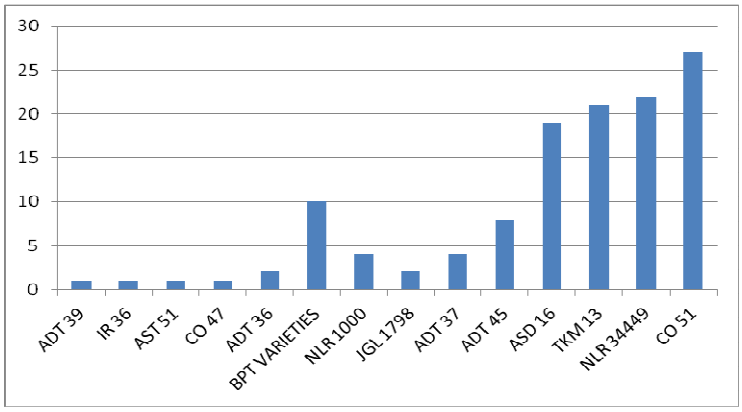
S. No	Characteristics	Category	Number of Farmers	Percentage (%)
1.	**Size of landholdings**	Marginal (< 1 ha)	8	10.67
		Small (1-2 ha)	11	14.67
		Medium (2-4 ha)	37	49.33
		Large (> 4 ha)	19	25.33
2.	**Source of Irrigation in Farm**	Open Well	13	17.33
		Bore Well	18	24
		Bore Well + Open Well	43	57.33
		Bore Well + Canal	2	2.67

Table 3: Annual Income of the Farmers

S. No	Income Range	Count	Percentage
1.	10,000 – 50,000	26	34.67
2.	50,000 – 1,00,000	25	33.33
3.	1,00,000 – 1,50,000	11	14.67
4.	1,50,000 – 2,00,000	9	12
5.	Above 2,00,000	4	5.33
	Total	**75**	**100**

Table 4: Type of Contract

Type of Contract	Count	Percentage
Private	34	45.33
Government	32	42.67
Quasi-government	9	12
Total	**75**	**100**



Graph 1: Most Commonly used Seed Varieties

Table 5: Month of Sowing

S. No	Month of sowing	Count	Percentage
1.	August to September	4	5.33
2.	November to December	4	5.33
3.	October to November	5	6.67
4.	September to October	62	82.67
	Total	**75**	**100**

Table 6: Constraints Faced by the Farmers in Seed Production

S. No	Factors	Rank
1	Land Availability	II
2	Water Availability	I
3	Skilled labour availability	III
4	Cost	V
5	Post - Harvest	IV

Table 7: Reasons for Choosing a Specific Variety

S. No	Factors	Rank
1	Yield	II
2	Demand	I
3	Suggestions from other farmers	IV
4	Subsidy for the specific variety	III

Table 8: Factors Involved in the Adoption of Seed Production

S. No	Factors	Rank
1.	More profitable than grain production	I
2.	To increase the quality of seed in the present market	III
3.	More subsidy compared to grain production	II
4.	Ancestral Profession	IV